

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (currently amended) An assembly suitable for thermally assisted/thermal information processing control, the assembly comprising:
a temperature sensing element comprising a piezoelectric film for measuring the blackbody radiation of a medium to produce measurement information; and,
a controller responsive to measurement information including a temperature of the medium from the temperature sensing element and ~~capable of~~ inputting power to a ~~media~~ medium based on ~~a measured~~ the temperature of the medium.

2. (canceled)

3. (canceled)

4. (canceled)

5. (canceled)

6. (currently amended) An assembly comprising:
a directed energy source ~~for heating~~ configured to heat a medium;
a temperature sensing element comprising a piezoelectric film for measuring the blackbody radiation of a medium to produce measurement information; and,
a controller responsive to measurement information including a temperature of the medium from the temperature sensing element and ~~capable of~~ inputting power to a ~~media~~ medium based on ~~a measured~~ the temperature of the medium.

7. (canceled)

8. (canceled)

9. (canceled)

10. (canceled)

11. (canceled)

12. (new) The assembly of claim 1 wherein the temperature sensing element is configured to measure the blackbody radiation of the medium at a location where thermally assisted/thermal information processing occurs.

13. (new) The assembly of claim 1 wherein the piezoelectric film is embedded in a recording head of a disk storage device and is configured to measure the blackbody of a disk as the medium.

14. (new) The assembly of claim 1 wherein the controller is configured to control an adjustable heat flux mechanism to input power to the medium based on the measured temperature of the medium.

15. (new) The assembly of claim 1 wherein the controller is configured to coordinate a mutual positioning between an energy source to input power to the medium and the medium.

16. (new) The assembly of claim 15 wherein the controller is configured to coordinate the mutual positioning between the energy source to input power to the medium and the medium so that a coupling between the energy source and the controller subsumes at least a portion of a thermal near-field.

17. (new) The assembly of claim 15 wherein the controller comprises an actuator to coordinate the mutual positioning.

18. (new) The assembly of claim 17 wherein the actuator is selected from the group consisting of a piezoelectric actuator, an electromagnetic actuator, a magnetic-strictive actuator, a thermal-mechanical actuator, and an air-bearing mechanism.

19. (new) The assembly of claim 1 wherein the controller comprises a servo loop which feeds on energy output by an energy source to adjust the temperature of the medium.

20. (new) The assembly of claim 1 wherein the controller is configured to enable thermally assisted/thermal information processing, which includes at least one of writing and erasing, by using an information signal.

21. (new) The assembly of claim 6 wherein the temperature sensing element is configured to measure the blackbody radiation of the medium at a location where thermally assisted/thermal information processing occurs.

22. (new) The assembly of claim 6 wherein the piezoelectric film is embedded in a recording head of a disk storage device and is configured to measure the blackbody of a disk as the medium.

23. (new) The assembly of claim 6 wherein the controller is configured to control an adjustable heat flux mechanism to input power to the medium based on the measured temperature of the medium.

24. (new) The assembly of claim 6 wherein the controller is configured to coordinate a mutual positioning between the directed energy source to input power to the medium and the medium.

25. (new) The assembly of claim 24 wherein the controller is configured to coordinate the mutual positioning between the directed energy source to input power to the medium and the medium so that a coupling between the directed energy source and the controller subsumes at least a portion of a thermal near-field.

26. (new) The assembly of claim 24 wherein the controller comprises an actuator to coordinate the mutual positioning.

27. (new) The assembly of claim 26 wherein the actuator is selected from the group consisting of a piezoelectric actuator, an electromagnetic actuator, a magnetic-strictive actuator, a thermal-mechanical actuator, and an air-bearing mechanism.

28. (new) The assembly of claim 6 wherein the controller comprises a servo loop which feeds on energy output by the directed energy source to adjust the temperature of the medium.

29. (new) The assembly of claim 6 wherein the controller is configured to enable thermally assisted/thermal information processing, which includes at least one of writing and erasing, by using an information signal.